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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/807,017

03/23/2004

David Feygin

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EXAMINER

MUSSELMAN, TIMOTHY A

ART UNIT

PAPER NUMBER

3714

MAIL DATE

DELIVERY MODE

04/15/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/807,017	Applicant(s) FEYGIN ET AL.	
	Examiner TIMOTHY MUSSELMAN	Art Unit 3714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-9, 11-31 and 34 is/are rejected.
- 7) ☐ Claim(s) 10, 32 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

In response to applicant's communication dated 1/28/2008, claims 1-34 are pending in this application.

Claim Rejections - 35 USC § 103

The following is a quotation of the relevant portion of 35 U.S.C. 103 that forms the basis for the rejections made in this section of the office action;

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Claims 1, 3-9, 11-17, 21-23, 25, 27-31, and 34, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lade (US 2,704,897) in view of Hoballah (US 6,398,557).

Regarding claims 1, 11-12, 14, 21-23, 27, and 34, Lade discloses a palpation module comprising a pseudo-vein situated against a foam rubber tissue simulating structure. See col. 1: 50-74. Lade discloses wherein the system is covered in a simulated skin in col. 2: 6-9. Note that the foam rubber backing would effectively oppose any downward force on the vein. Lade does not disclose wherein a magnetic force opposes motion on the vein. However, Hoballah teaches of a medical training device that utilizes magnetic forces to control feedback to the user. See col. 7: 36-50. In view of this teaching and in view of the broadness of applicant's claim, it would have been obvious to one of ordinary skill in the art to use this broad concept of magnetic force to control feedback in other medical training systems also, because it would be the application of a known feedback technique to a similar structure (similar in that it is a structure manipulated in a medical simulation). Regarding the limitation from claim 12 regarding a

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constant force, the foam rubber backing would generally create a constant opposition force, particularly when the applied force is constant. Regarding claim 21, the outer skin acts as a housing, and the palpation module is disposed within. Fig. 1 shows a syringe entering through an opening in the structure.

Regarding claims 3 and 7, Lade discloses the palpation module with a simulated vein beneath a simulated skin as described above, and further discloses in col. 2: 52-66 wherein the vein can be filled with fluid, which could effectively create varying stiffness levels (engorgement) by varying the fluid level in the vein.

Regarding claim 4, Jade discloses wherein the palpation module comprises the pseudo vein. See col. 1: 50-74.

Regarding claim 5, the system disclosed by jade in col. 1: 50-74 and the alternative embodiment of col. 2: 34-51, would each involve the vein yielding at least somewhat to downward pressure, as the vein rests on a bed of either foam rubber or alternatively cotton.

Regarding claims 6 and 30, the vein described in col. 1: 50-75 is at least partially rigid, as it is a rubber or latex material.

Regarding claim 8, Jade discloses wherein the vein can be felt, but is not visibly discernable. See col. 2: 67-78.

Regarding claim 9, Jade discloses obscuring the vein to control the difficulty with which it can be felt. See col. 2: 67-77.

Regarding claims 13, 15-17, 28-29, and 31, Jade does not teach of a variable magnetic force. However, this is disclosed by Hoballah in col. 7: 36-50. In this citation Hollballah also teaches of using

varying electromagnets (coils) in conjunction with permanent magnets to generate the appropriate magnetic fields. It would have been obvious to incorporate this broad concept into the system of Jade for the reasons and motivations set forth above with regard to the magnetic limitations in claim 12. Note regarding claim 14 that a force slightly greater than that of gravity would be a force providing slight resistance, which is consistent with the force that would oppose a user pressing a vein against a cotton backing as disclosed by Jade in col. 2: 34-51. Note with regard to the magnet varying stiffness, as claimed in claim 17, what Hoballah is disclosing is how the magnetic force controls the force required to move the structure, which is consistent with applicant's use of the term.

Regarding claim 25, Jade discloses wherein a needle is interfaced to the system. See fig. 1.

Claims 2 is and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lade (US 2,704,897) in view of Adams (4,134,218).

Regarding claims 2 and 20, Jade discloses a palpation module comprising a pseudo-vein disposed beneath a pseudo skin. See col 1: 50-74 and col. 2: 6-9. Jade does not teach of measuring a change in position of the pseudo vein. However, Adams teaches of a simulated medical structure wherein a user palpates a structure, and the resulting positional changes are measured (as pressure) and sent to a data processing system. See col. 3: 23-37. In view of this teaching and in view of the broadness of applicant's claim, it would have been obvious to one of ordinary skill in the art to use this broad concept of position measurement to control in other medical training systems also, because it would be the application of a known feedback technique to a similar structure (similar in that it is a structure manipulated in a medical simulation).

Claims 18-19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lade (US 2,704,897) in view of Hoballah (US 6,398,557) and Cunningham et al. (US 6,470,302).

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Regarding claims 18-19 and 24, neither Cunningham nor Hoballah teach of a skin stretch module.

However, this is known in the art of vascular palpation modules. Cunningham discloses a vascular palpation module wherein the skin is stretched and measured, and the stretching indicates an occlusion technique is performed (for the update of the computer display). See col. 11: 32-54. It would have been obvious to one of ordinary skill in the art to update the system of Lade with current skin simulation technology as taught by Cunningham, in order to improve the device by making it more realistic and also providing feedback for performance evaluation purposes. Regarding the second opening described in claim 24, fig. 1 shows wherein there are additional openings at the end of the structure.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lade (US 2,704,897) in view of Hoballah (US 6,398,557) and Adams (4,134,218).

Regarding claim 26, Jade/Hoballah do not disclose wherein the palpation module is connected to a data processing system. However, this is old and well known in the art of palpation simulations. For example, Adams discloses this feature in col. 11: 32-54. It would have been obvious to one of ordinary skill in the art to update the system of Lade with current skin simulation technology as taught by Cunningham, in order to improve the device by providing feedback for performance evaluation purposes.

Allowable Subject matter

Claim 10 contains allowable subject matter, but is objected to for depending from a rejected base claim. This claim would be allowable if rewritten to include the limitations of the base claim and any intervening claims. This claim is considered allowable because the prior art does not teach or suggest wherein if sufficient pressure is applied to a simulated target structure during a palpation technique, the target structure is no longer detectable.

Claims 32-33 contain allowable subject matter, but are objected to for depending from a rejected base claim. This claim would be allowable if rewritten to include the limitations of the base claim and any

intervening claims. These claims are considered allowable because the prior art does not teach or suggest a palpation module that utilizes the specific structure comprising a simulated anatomical member disposed on a first plate, movable towards a second plate, and wherein a sensor is indicative of the distance between said plates.

Response to Arguments

Applicant's arguments dated 1/28/2008 have been fully considered, but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY MUSSELMAN whose telephone number is (571)272-1814. The examiner can normally be reached on Mon-Thu 6:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571)272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. M./
Acting Examiner of Art Unit 3714

/Robert E Pezzuto/
Supervisory Patent Examiner, Art Unit
3714

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